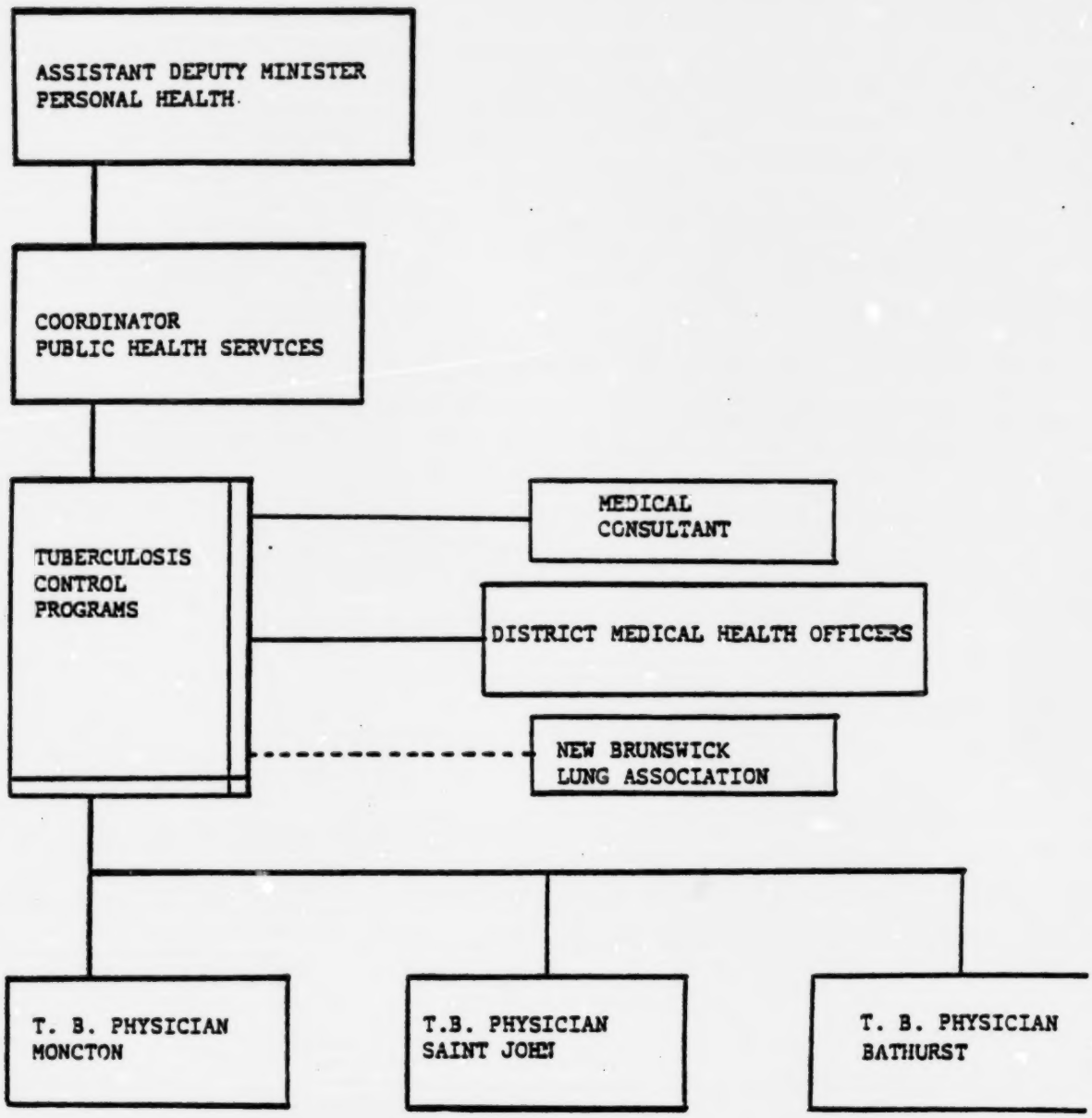
TUBERCULOSIS CONTROL - 1981

NEW BRUNSWICK DEPARTMENT OF HEALTH

NEW BRUNSWICK LUNG ASSOCIATION

ORGANIZATION OF TUBERCULOSIS CONTROL



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FOREWORD

This will probably be the final annual report of the Division of Tuberculosis Control, New Brunswick. The recent decision by the Department of Health to close out the division as an entity of the Department will result in tuberculosis treatment being placed into the hospital services facilities and case finding with the district medical health officers.

The diminishing number of new cases found during recent years has made it unnecessary to continue the extensive case-finding program which the Division had instigated and promoted. The principle of placing treatment of tuberculosis into the general hospital facility is justifiable. However, unless the responsibility for these cases is placed under a medical service, there is concern that there will be inadequate follow-up therapy and inadequate contact investigation.

The power of the tuberculous disease process with all of its ramifications both to the individual and to the community remains as a potential hazard. True, that most persons who are found to have new active disease will by means of drug treatment have the condition arrested and in most cases, cured. The disease, however, when it attacks the individual has the same power and appears in all of its various forms. The disease has always been a very indefinite affliction with only generalized symptoms of ill health, in its initial stages. It has no prodromal symptoms such as rash, found in some infectious conditions. It follows that many of the cases coming to treatment in the general hospitals will be in an advanced stage by the time the diagnosis is made. This means that they have been infectious to others, for some time and capable of originating new cases

A marked improvement in the control of this infectious disease is due now. The number of new active and reactivated cases of tuberculosis in Canada, reported in 1980 was 2,841. Of interest is the fact that in the first five years of this decade the number dropped by approximately one thousand; in the last five years the decrease was only seven hundred. There is a very real possibility that complacency may be present and with decreasing preventive work the incidence could remain static or some resurgence occur.

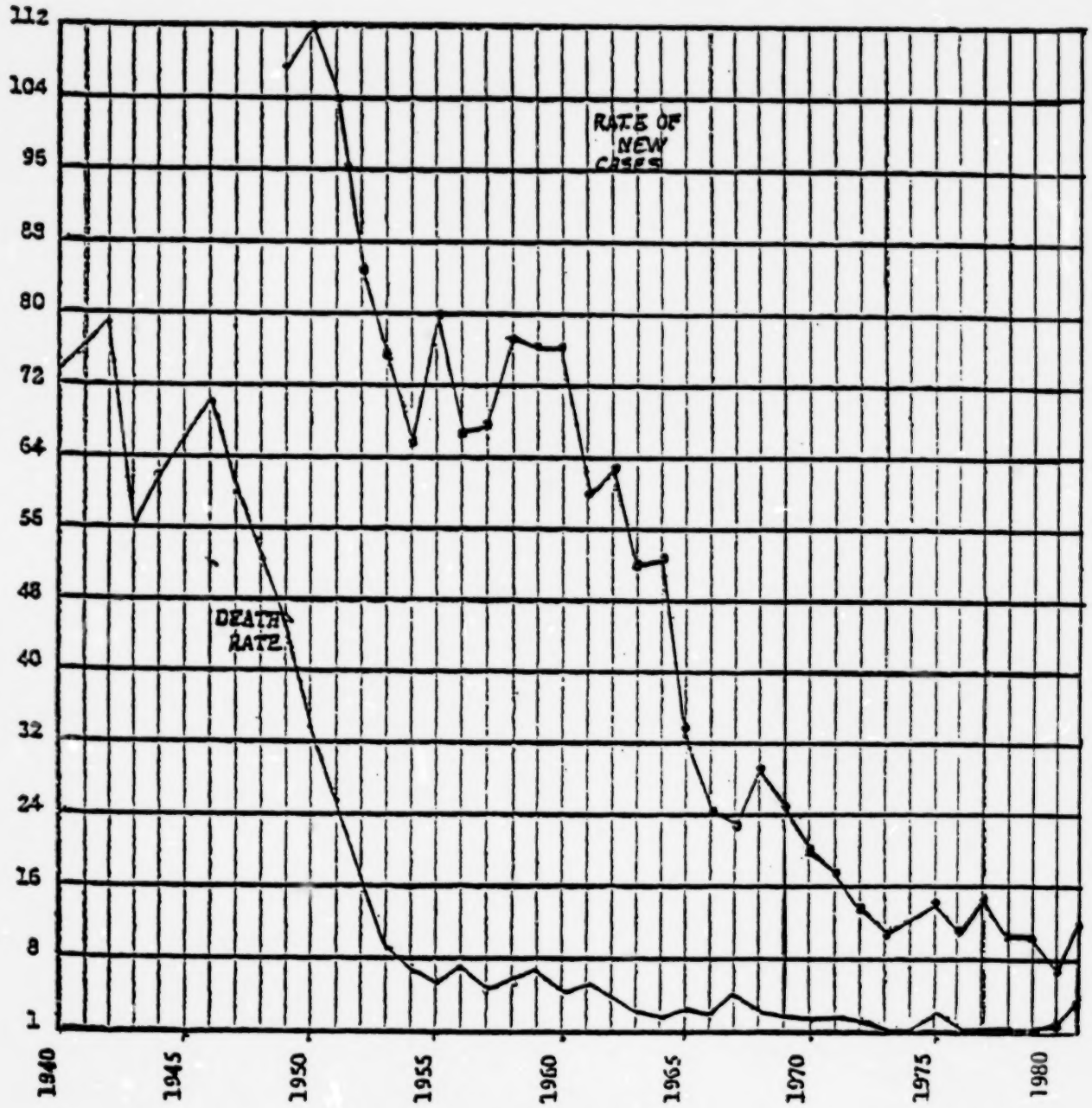
The number of new active cases reported in New Brunswick in 1981 was 65 compared with 49 in 1980. The increase of 33% is very substantial and though there have been variations in recent years it has been many years since the increase was this large.

The graph which accompanies this report depicts the rate of new cases per hundred thousand population. The rate is 10.1 for 1981 as compared with 7 for the previous year.

The number of deaths reported due to tuberculosis was 7 in 1981. These are people who had advanced intractible disease which did not respond to treatment.

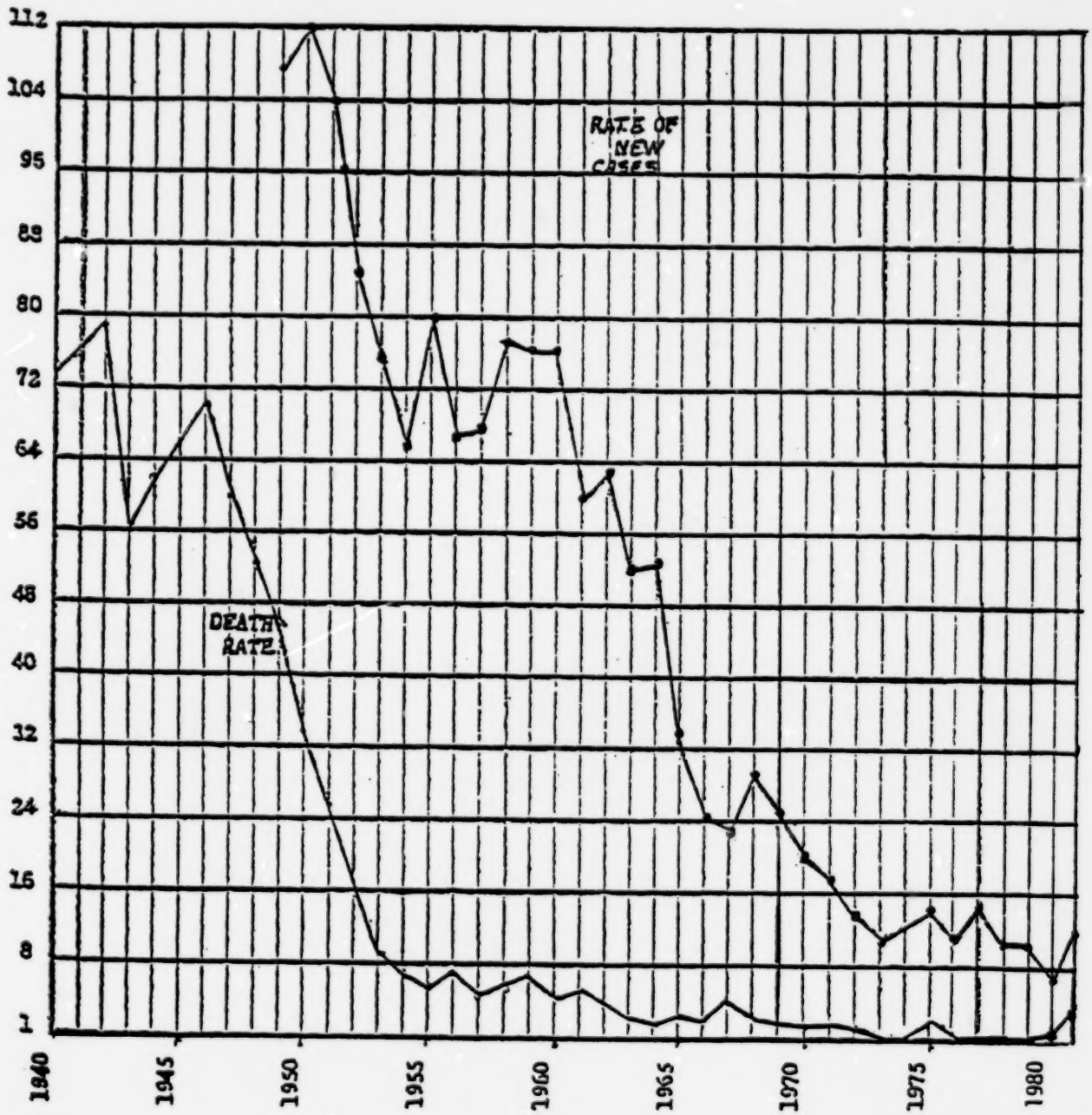
These facts substantiate the premise of these remarks that tuberculosis remains a potent infectious disease. It is present in our society, much reduced in numbers, but in certain parts of the world it continues to be a major health problem.

TUBERCULOSIS RATES IN NEW BRUNSWICK



RATE PER 100,000 POPULATION

TUBERCULOSIS RATES IN NEW BRUNSWICK



RATE PER 100,000 POPULATION

Annual Report of the Division of Tuberculosis Control
New Brunswick
Year Ending December 31, 1981

Hopefully the very substantial increase in the number of new active cases of tuberculosis in 1981, compared with the previous year is not a trend developing as a result of diminishing activity in case-finding. While there has been some variation in the number of new active cases in recent years, the 65 reported for 1981 represents an increase of 33% over the preceding year.

The Division of Tuberculosis Control records the new cases found and placed on treatment in the province. These are reported to the Bureau of Statistics for the record of the incidence of the disease of the province. The information which leads to the numbers reported comes from records of patients admitted or diagnosed while in general hospitals or clinics and laboratory reports which are the results of material examinations. In addition to recording the case the Division determines that the case is being investigated. This is referred back to the Health District not only to determine treatment but also to investigate the source and contact follow-up.

The number of new active cases in 1981 was 65 and for 1980 the number was 49. These are recently discovered persons with the disease in an active symptomatic state. They have not had any direct evidence of the disease in previous years. There were also 7 persons classed as reactivations. These re-activated cases are people who have a history of previous tuberculosis or some evidence of old infection which is now in an active state. Obviously the present active disease is the result of a

breakdown of some previous infection which had been controlled by the body for some time previously. Regardless of the term of classification these are potentially infective and are a danger to other persons.

Some of these reactivations are persons who had a definite diagnosis previously and drug therapy for their disease. This raises the question of whether the drug therapy received at the time of the original diagnosis, inactivated the organism and later in life, systemic changes allow the bacteria to become viable again. While the number of reactivations in this province is small, it is of concern. There is no certainty that drug therapy will in every case, enable the body to eliminate the infection for all time. And, quite frequently, there is apparently the development of organisms resistant to certain of the tuberculous drugs.

Upon review of the active cases of tuberculosis, it is found that 31 of the 65 new cases were in persons over 50 years of age. There were 15 of these over the age of 70 years. These numbers exceed by far the ratio which this age group of people occupy in the population. For example, in the population of Canada, persons over the age of 70 years made up 17% of the total, in the 1976 census. Yet, in this province, 15 of the total new cases or about 24% of the total were over 70 years. Probably many of these older people received tuberculous infection in their earlier years but were able to control or prevent active disease process. Now, in later life their resistance is lower and the bacillus activates to progressive disease. Clinically, many of the older patients do not respond to the drug treatment as well as younger patients. Also, almost all of these older patients had disease of the lungs which means that they are much more able to spread the disease to others.

Deaths classed as being due to tuberculosis in 1981 were 7. These are persons who had extensive disease process which did not respond to therapy or who, at autopsy, were found to have active tuberculous disease process, usually of the lungs. There seems to be some yearly variation in the numbers in recent years, as in 1980 there were only 3, so recorded.

A review of the tuberculosis prevention or case-finding activities shows that considerable work was done.

The diagnostic clinics had 5,107 visits during 1981. And these resulted in the reporting of 33 active cases. This is about one-half of the total new cases in the province. Also, 5 persons were recorded as reactivated.

The table reporting on all of the clinics lists the work done at the various centres. Moncton has the largest attendance, with Bathurst being next. Both of these clinics serve areas where tuberculosis has been a significant factor in the health status of the general population.

Also, these clinic centres serve as follow-up facilities for previously known cases of the disease. Some 1,020 examinations of the classified inactive cases were made. Some of these are people on drug therapy either completing their course of therapy or on preventive therapy. About one-third of the examinations were done on persons listed as non-tuberculous. These are people referred for suspicion or contacts of active cases; and some as observation of community groups in whom there is suspicion.

Tuberculin testing listed in Table No. 3 shows that over 4,000, mainly school children or employees of schools were tested. Most of this

work is done by clinic or district health nurses. In general, the interest in this work is declining. Planned as a sampling type of procedure with certain schools or classes of specific age groups, the procedure is a survey Tine type of test. While not as accurate or as diagnostic as the intradermal test, it is a valuable survey procedure. It can and does indicate by survey means the disease incidence. Of the 4,130 persons tested, there were 2,078 children done and this resulted in 78 positives or 3.8% of the total. If this percentage is reflected into the school population it would be considered as fairly high. The rate for the previous year was 2.7% for the 4,385 children tested. The adults had a positive rate of 17.3% and is about the same as the previous year.

Again it is essential to emphasize that the tuberculin testing is done by mass survey technique. It cannot be considered as diagnostic. Also, the interpretation is done by a number of people and there is bound to be variation. However, as already mentioned the rate for the school children is much higher than in recent years. And, particularly noticable when previous rates are reviewed and it is found that rates of one or less than two per cent were positive a few years ago. One statement some years ago gave 2% as the percentage positive figure for a community where tuberculosis was under adequate surveillance.

Drug therapy both on a treatment basis and a preventive method continues to be an essential part of a control program. Treatment of an active case is necessary for at least a year and in more extensive disease, up to two years. Much of this therapy can and is provided to patients at home. These people do very well provided they continue their

medication on a daily basis. It is this follow-up of the cases on drug therapy which the clinic service does so well. In 1981, there were 126 patients receiving drug therapy either in hospital or at home. In addition, there were 375 who received some drug treatment on a preventive basis, during the year. Thus the total in the province receiving one or more forms of specific tuberculosis medication at the end of 1981 was 501.

Hopefully, the preventive therapy which is given to positive tuberculin reactors (recent contacts or suspect persons) will prevent these people from active disease in the future. It is a very important part of a tuberculosis control program.

Again this past year, New Brunswick accepted a number of immigrants who had been diagnosed as having tuberculosis. Several, who were admitted under Canada's refugee acceptance program had active disease. Treatment was provided to the cases and many of the family members were given preventive therapy. While co-operation of the individuals is fairly satisfactory, there are some who are lost to adequate follow-up. Moving to other provinces without advance notification of their future location is one of the problems. It cannot be emphasized too often that close surveillance of new arrivals to the country is essential if tuberculosis is to be controlled. The natural desire of many immigrants to avoid further contact with regimentation makes even the health worker seem suspect and perhaps to be avoided.

The pages which follow contain the statistical tables and reports of the tuberculosis control activities in the province for the year 1981.

TABLE No. 1

The Table below concerns the Treatment of Patients in 1981 compared with 1980:

	1981	1980
Patients in Hospital as at December 31st	8	11
Number of patients discharged during the year	151	149
* Number of patients admitted during the year	150	149
* Number admitted found to be tuberculous	98	92
Number of New Cases of Tuberculosis	72	49
Number of New Active Cases of Tuberculosis	65	49
Reactivations - Tuberculous Readmissions	7	10

* Includes In-Hospital Recheck Examination as part of complete treatment.

TABLE No. 2

SUMMARY OF TUBERCULOSIS DIAGNOSTIC CLINIC - 1981

NAME OF CLINIC	TOTAL VISITS	ACTIVE	REACTI-VATED	IN-ACTIVE	DOUBT. ACT. & SUSPECTS	NON-TBC
BATHURST TB CLINIC Chaleur General Hospital Bathurst, N. B.	663	10	-	147	-	496
DALHOUSIE TB CLINIC St. Joseph's Hospital Dalhousie, N. B.	115	3	1	-	75	36
EDMUNDSTON TB CLINIC Hotel-Dieu d'Edmundston Edmundston, N. B.	308	2	-	87	134	85
FREDERICTON TB CLINIC Dr. Everett Chalmers Hospital Fredericton, N. B.	8	3	-	-	5	-
GLOUCESTER COUNTY CLINIC Hotel-Dieu de St. Joseph Tracadie, N. B.	130	-	-	31	-	99
GRAND FALLS TB CLINIC Grand Falls General Hospital Inc. Grand Falls, N. B.	14	-	-	8	4	2
KENT COUNTY CLINIC Stella Maris Hospital Ste. Anne de Kent, N. B.	232	-	-	58	-	15
MONCTON CHEST CLINIC 428 Collishaw Street Moncton, N. B.	2,522	9	3	362	253	321
NORTHUMBERLAND COUNTY CLINIC Miramichi Hospital Newcastle, N. B.	590	2	-	121	2	465
ST. QUENTIN TB CLINIC Hotel-Dieu Hospital St. Quentin, N. B.	47	-	-	15	32	-
SAINT JOHN TB CLINIC Saint John Regional Hospital (Western Division) Saint John, N. B.	478	4	1	191	45	237
	5,107	33	5	1,020	550	1,756

TABLE No. 3

TUBERCULIN TESTING - 1981

COUNTY	TOTALS	ADULTS	CHILDREN	ADULTS POSITIVE	CHILDREN POSITIVE
ALBERT	-	-	-	-	-
CARLETON	-	-	-	-	-
CHARLOTTE	-	-	-	-	-
GLOUCESTER	873	580	293	114	11
KENT	-	-	-	-	-
KINGS	-	-	-	-	-
MADAWASKA	118	113	5	15	-
NORTHUMBERLAND	558	255	303	49	5
QUEENS	-	-	-	-	-
RESTIGOUCHE	149	119	30	41	-
SAINT JOHN	318	279	39	34	4
SUNBURY	-	-	-	-	-
VICTORIA	11	10	1	1	-
WESTMORLAND	2,056	676	1,380	101	57
YORK	47	20	27	1	1
TOTALS	4,130	2,052	2,078	356	78

PERCENTAGE POSITIVE FOR CHILDREN TESTED: 3.8%

PERCENTAGE POSITIVE FOR ADULTS TESTED: 17.3%

TOTAL PERCENTAGE POSITIVE TESTED: 10.5%

TABLE No. 4

TREATMENT STATISTICS

PROVINCE OF NEW BRUNSWICK 1981

	CHALEUR GENERAL HOSPITAL	SAINT JOHN REGIONAL HOSPITAL - WEST	TOTALS
No. of Patients in Residence end of Hospital Year 1980	4	7	11
No. of Admissions during Hospital Year 1981	115	35	150
No. of Patients Discharged during Year 1981	112	39	151
No. of Patients in Residence end of Hospital Year 1981	5	3	8
Total No. of Hospital Days 1981	1,676	2,192	3,868
Total No. of Hospital Days 1980	2,799	2,291	5,090

These treatment figures are for two hospitals (Chaleur General and Saint John Regional Hospital, Western Division) where there are treatment units. Patients admitted include a number for diagnosis which results in a number of non-tuberculous cases being included in the figures. Also included in the admissions and discharges are patients who are out at home on drug therapy and come for a brief re-check examination.

Of the 65 New Active Cases for 1981 (Table No. 1), 31 were admitted to these two units, and 34 cases were treated as out-patients, 17 of which were non-infectious. All were given drug therapy.

The longest stay in hospital for a new patient was 145 days and the shortest stay was 2 days. As part of the complete patient care, drug therapy is usually continued after discharge for a period of 12 to 24 months.

There were 7 deaths attributed to Active Tuberculosis.

TYPE OF NEW CASES OF TUBERCULOSIS ADMITTED BY COUNTY - 1981

COUNTY	Pulmonary Tuberculosis	Miliary Tuberculosis	Primary Tuberculosis	Pleural Tuberculosis	Other Forms of Tuberculosis	Total 1981	Total 1980
ALBERT	1	-	-	-	-	1	-
CARLETON	1	-	-	-	-	1	-
CHARLOTTE	1	-	-	-	1	2	2
GLOUCESTER	18	-	1	1	8	28	9
KENT	2	-	-	-	-	2	-
KINGS	2	-	-	-	1	3	2
MADAWASKA	-	-	-	-	-	-	3
NORTHUMBERLAND	7	-	1	2	-	10	5
QUEENS	-	-	-	-	-	-	-
RESTIGOUCHE	5	-	-	1	-	6	5
SAINT JOHN	1	1	-	-	2	4	8
SUNBURY	-	-	-	-	-	-	1
VICTORIA	-	-	-	-	-	-	3
WESTMORLAND	5	-	-	-	-	5	9
YORK	3	-	-	-	-	3	2
TOTALS:	46	1	2	4	12	65	49

TABLE NO. 6

NUMBER OF NEW CASES OF TUBERCULOSIS - 1981

PER 1,000 POPULATION OF COUNTY

COUNTY	NEW CASES	1976 POPULATION	RATE PER 1,000
ALBERT	1	22,159	.05
CARLETON	1	24,561	.04
CHARLOTTE	2	25,423	.08
GLOUCESTER	28	81,025	.35
KENT	2	28,987	.07
KINGS	3	43,588	.07
MADAWASKA	-	34,892	-
NORTHUMBERLAND	10	54,894	.20
QUEENS	-	12,720	-
RESTIGOUCHE	6	40,620	.15
SAINT JOHN	4	91,103	.05
SUNBURY	-	21,190	-
VICTORIA	-	20,932	-
WESTMORLAND	5	105,725	.05
YORK	3	71,431	.04
TOTALS:	65	678,250	.10

Based upon Statistics Canada Population 1976, the
New Case Rate is .10 per 1,000 population or 10 per 100,000

TABLE No. 7

NEW CASES OF TUBERCULOSIS 1981

TYPE OF DISEASE BY AGE

	0 - 4	5 - 14	15 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 & Over
PULMONARY	-	4	-	9	7	-	4	10	12
MILIARY	-	-	-	-	-	-	1	-	-
PRIMARY	-	2	-	-	-	-	-	-	-
PLEURISY	-	-	-	2	-	-	-	-	2
OTHERS	1	-	-	-	-	-	-	-	-
NON-PULMONARY	-	3	3	-	3	-	1	-	1
TOTALS:	1	9	3	11	10	-	6	10	15

COMMENTS ON TABLES

It is noteworthy in Table No. 5 that two counties, Gloucester and Northumberland had very marked increase in the number of new cases compared with the previous years. These two counties accounted for 58% of the total reported. While this area of the province has always had a high incidence of the disease, in relation to other parts, this past year has shown an increased disparity. This indicates the need for continued tuberculosis surveillance of this portion of the province. And, as this table shows, the majority of the cases were pulmonary in type and probably infectious to others for some considerable time prior to detection and treatment.

The case rate per 1000 of population in Table No. 6 has increased as compared with 1980. The rate of 10 per 100,000 will likely be near or slightly below the national average.

Table No. 7 provides a breakdown of the new cases according to the various age groups. Comment has already been made about the proportion in the seventy and over age group. Of concern is the number of cases under 20 years of age. In 1980 there were 5 whereas in 1981 there were 13 new cases. This signifies that the infection is reaching these young people presumably from older positive infectors.

SUMMARY

The figures concerning tuberculosis in New Brunswick are reviewed in this report. The comments seem to be relevant to the changing approach to the disease.

Tuberculosis continues to be a major health problem in many parts of the world. The disease remains endemic in this province and in Canada as a whole. The fact that with the introduction of specific drug therapy about thirty years ago, there was a dramatic drop in the morbidity and mortality rates, may have resulted in a very false sense of security. The condition is due to a germ which was discovered and defined as the cause one hundred years ago. It remains as an infection which requires continued preventive health activity. Neglect of the proven control practises which have markedly lowered the incidence in this country, may well allow it to remain endemic. And to the unfortunate person who becomes infected and progresses to active disease, it is a major illness. Only continued preventive practises will bring about control.

In Canada, the earliest attack against the disease was instituted by public volunteers who formed the Canadian Tuberculosis Assocition. Representative groups were formed in all parts of the country and in this province, the New Brunswick Lung Association has made a great contribution to tuberculosis control. This group operates the Saint John Clinic and does much in the preventive field by an educational program. All of the work being done and the accomplishment which has resulted is due to the contribution of many people.

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